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FORM PTO-1390 (Modified) (REV 5-93) U.S DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTORNEY'S DOCKET NUMBER
TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371		026032-3884
		U.S. APPLICATION NO. (If known, see 37 CFR 1.5) Not yet available 10/030588
INTERNATIONAL APPLICATION NO. PCT/US00/18821	INTERNATIONAL FILING DATE July 7, 2000	PRIORITY DATE CLAIMED July 7, 1999

TITLE OF INVENTION
SPACE EFFICIENT AND ADAPTABLE VEHICLE INTERIOR

APPLICANT(S) FOR DO/EO/US
James HOTARY; David B. BUSCH; and Michael E. WIEDEMAN

Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:

1. ☒ This is a FIRST submission of items concerning a filing under 35 U.S.C. 371.
2. ☐ This is a SECOND or SUBSEQUENT submission of items concerning a filing under 35 U.S.C. 371.
3. ☒ This express request to begin national examination procedures (35 U.S.C. 371(f)) at any time rather than delay examination until the expiration of the applicable time limit set in 35 U.S.C. 371(b) and PCT Articles 22 and 39(1).
4. ☒ A proper Demand for International Preliminary Examination was made by the 19th month from the earliest claimed priority date.
5. ☒ A copy of the International Application as filed (35 U.S.C. 371(c)(2))
   - ☐ is transmitted herewith (required only if not transmitted by the International Bureau).
   - ☐ has been transmitted by the International Bureau.
   - ☒ is not required, as the application was filed in the United States Receiving Office (RO/US)
6. ☐ A translation of the International Application into English (35 U.S.C. 371(c)(2)).
7. ☒ Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))
   - ☐ are transmitted herewith (required only if not transmitted by the International Bureau).
   - ☐ have been transmitted by the International Bureau.
   - ☐ have not been made; however, the time limit for making such amendments has NOT expired.
   - ☒ have not been made and will not be made.
8. ☐ A translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).
9. ☐ An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).
10. ☐ A translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).
11. ☐ Applicant claims small entity status under 37 CFR 1.27 .

Items 12. to 17. Below concern other document(s) or information included:

12. ☐ An Information Disclosure Statement under 37 CFR 1.97 and 1.98.
13. ☐ An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.
14. ☐ A FIRST preliminary amendment.
    ☐ A SECOND or SUBSEQUENT preliminary amendment.
15. ☐ A substitute specification.
16. ☐ A change of power of attorney and/or address letter.
17. ☐ Other items or information: OTHER

DATE JAN 3, 2002 EXPRESS MAIL NO. EV004220038US

CERTIFICATE OF MAILING BY EXPRESS MAIL

I hereby certify that the attached documents, pursuant to 37 CFR 1.10, are being deposited as "Express Mail" this date with the United States Postal Service in an envelope addressed to the Assistant Commissioner for Patents, Washington, DC 20231..

By Chris Toomey
Signature of person depositing Express Mail

001.1143805.1 FORM PTO-1390 (Modified)

U.S. APPLICATION NO. (If known, see 37 CFR 1.5) 10/050586	INTERNATIONAL APPLICATION NO. PCT/US00/18821	ATTORNEY'S DOCKET NUMBER 026032-3884
Not yet available		

18. ☒ The following fees are submitted:	CALCULATIONS	PTO USE ONLY
Basic National Fee (37 CFR 1.492(a)(1)-(5): Search Report has been prepared by the EPO or JPO.....$860.00		
International preliminary examination fee paid to USPTO (37 CFR 1.482).....$690.00		
No international preliminary examination fee paid to USPTO (37 CFR 1.482) but international search fee paid to USPTO (37 CFR 1.445(a)(2) $710.00		
Neither international preliminary examination fee (37 CFR 1.482) nor International search fee (37 CFR 1.445(a)(2)) paid to USPTO $1,000.00		
International preliminary examination fee paid to USPTO (37 CFR 1.482) and all claims satisfied provisions of PCT Article 33(2)-(4) $100.00		
ENTER APPROPRIATE BASIC FEE AMOUNT =	$860.00	
Surcharge of $130.00 for furnishing the oath or declaration later than 20 Months from the earliest claimed priority date (37 CFR 1.492(e))	$130.00	

Claims	Number Filed		Included in Basic Fee		Extra Claims		Rate		
Total Claims	32	-	20	=	12	×	$18.00	$216.00	
Independent Claims	3	-	3	=	0	×	$80.00	$0.00	
Multiple dependent claim(s) (if applicable)							$270.00		
TOTAL OF ABOVE CALCULATIONS =								$1,206.00	
Reduction by ½ for filing by small entity, if applicable.								$0.00	
SUBTOTAL =								$1,206.00	
Processing fee of $130.00 for furnishing English translation later the 20 months from the earliest claimed priority date (37 CFR 1.492(f). +									
TOTAL NATIONAL FEE =								$1,206.00	
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). $40.00 per property +									
TOTAL FEES ENCLOSED =								$1206.00	
							Amount to be: refunded	$	
							charged	$	

a. ☒ A check in the amount of $1206.00 to cover the above fees is enclosed.

b. ☐ Please charge my Deposit Account No. 06-1447 in the amount of $990.00 to the above fees. A duplicate copy of this sheet is enclosed.

c. ☒ The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 06-1447. A duplicate copy of this sheet is enclosed.

NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status.

SEND ALL CORRESPONDENCE TO:

Foley & Lardner
Firstar Center
777 East Wisconsin Avenue
Milwaukee, Wisconsin 53202-5367

SIGNATURE _____ 1/3/2002

NAME JOHN M. LAZARUS

REGISTRATION NUMBER 48,367

SPACE EFFICIENT AND ADAPTABLE VEHICLE INTERIOR

TECHNICAL FIELD OF THE INVENTION

This invention generally relates to seating assemblies for a vehicle and, more particularly, to a front seat assembly and a rear seat assembly which, when used individually or in combination, provide a highly adaptable vehicle interior.

BACKGROUND OF THE INVENTION

With an ever increasing pressure from automotive consumers, flexibility and adaptability of vehicle interiors is increasingly required in order to provide a vehicle adapted to meet the broad consumer demand. Further, with increased social awareness of a vehicle's impact on the environment, there is an increasing demand to minimize the overall mass of the vehicle while still meeting the feature requirements of the consumer. One of these demands of the consumer is the ability of the vehicle to carry four passengers during some situations and to maximize cargo room during other situations. Some attempts to meet this demand have included the use of folding rear seat assemblies. These attempts, however, can only provide limited cargo room. For example, French Patent No. 2,572,340 ("Renault") shows a rear seat assembly that is adapted for nesting behind a front seat assembly by sliding, non-articulating, movement along an inclined track which tends to limit the available cargo space due to the raised track portion.

SUMMARY OF THE INVENTION

Accordingly, this invention provides for a front seat assembly and a rear seat assembly, which overcome the problems and disadvantages of the conventional techniques in the art. The invention also provides for a front seat assembly and a rear seat assembly that allows the rear seat assembly to articulate forward and downward and to be stored below and behind the front seat assembly. The invention also provides for a front seat assembly that increases leg and foot room for the occupants of the rear seat assembly.

In one aspect, the invention includes a front seat assembly for a vehicle having a rear seat assembly with a rear seat bottom, including a front seat bottom having a front portion and a rear portion and a support member connected to the front seat bottom and connectable to the vehicle. The support member supports the rear portion of the front seat bottom from the vehicle such that the rear seat bottom may be moved from a use position to

a stored position with a forward portion of the rear seat bottom located under the front seat bottom.

In another aspect, the invention includes a rear seat assembly for a vehicle having a front seat assembly with a front seat bottom and a front seat back, including a rear seat bottom having a forward portion and a rearward portion and being connectable to the vehicle for movement between a use position and a stored position. When the rear seat bottom is moved from the use position to the stored position, the forward portion of the rear seat bottom is located under the front seat bottom.

In a further aspect, the invention includes a front seat assembly and a rear seat assembly for a vehicle, including a front seat bottom having a front portion and a rear portion, a rear seat bottom having a forward portion and a rearward portion and being connectable to the vehicle for movement between a use position and a stored position, and a support member connected to the front seat bottom and connectable to the vehicle. The support member supports the rear portion of the front seat bottom from the vehicle such that the rear seat bottom may be moved from the use position to the stored position with the forward portion of the rear seat bottom located under the front seat bottom.

BRIEF DESCRIPTION OF THE DRAWINGS

The various advantages of the present invention will become apparent to one skilled in the art upon reading the following specification and by reference to the drawings in which:

Figure 1 is a perspective view of the rear seat assembly, according to the preferred embodiment of the invention;

Figure 2 is a perspective view of the biasing device, articulation mechanism, and the slide mechanism, according to the preferred embodiment of the invention;

Figures 3A-3D are side views of the front seat assembly and the rear seat assembly, according to the preferred embodiment of the invention;

Figure 4 is a perspective view of the biasing device and the articulation mechanism, according to an alternative embodiment of the invention;

Figure 5 is a perspective view of the slide mechanism, according to an alternative embodiment of the invention;

Figure 6 is a perspective view of the front seat assembly, according to the preferred embodiment of the invention;

Figure 7 is a perspective view of the front riser, according to the preferred embodiment of the invention;

Figure 8 is a perspective view of the adjustment device, according to the preferred embodiment of the invention; and

Figure 9 is a perspective view of the center console, according to an alternative embodiment of the invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

The following description of the preferred embodiments is merely exemplary in nature and is no way intended to limit the invention, or its application, or uses.

As shown in Figure 1, a rear seat assembly 10 is shown which in the preferred embodiment incorporates a 60/40 split rear seat back 12. Preferably, either or both portions of the rear seat back 12 are pivotally attached to the rear seat bottom 14 of the rear seat assembly 10. Alternatively, the rear seat back 12 can be secured at a fixed angle relative to the rear seat bottom 14.

As shown in Figure 2, the rear seat bottom 14 of the rear seat assembly 10 is preferably pivotally attached to a proximal end of four lift arms 16, 18, 20, 22 of an articulation mechanism 24 which are subsequently pivotally attached at their distal ends to a slide mechanism 26. The slide mechanism 26 preferably engages seat guides 28 which generally traverse fore and aft in the vehicle 40 and allow the slide mechanism 26 to be adjusted fore and aft in the vehicle 40 as described later. In the preferred embodiment, a torsion spring 30 is coupled between the structure of the rear seat bottom 14 and one or more of the lift arms 16, 18, 20, 22 to provide assistance in raising the rear seat assembly 10 from a stored position to a use position. Further, in the preferred embodiment, latch mechanisms 32 are provided near a rearward portion 34 of the rear seat bottom 14 and engage complementary strikers 36 secured to the floor 38 of the vehicle 40. The latch and striker combination 42 secures the rear seat bottom 14 in the use position for occupant seating.

When the vehicle 40 user wishes to increase the cargo carrying capacity and store the rear seat assembly 10, the latch and striker combination 42 is preferably released by actuating the riser release handle 44. The rear seat assembly 10 is then moved forward from the use

position, as shown in Figure 3A, to the first intermediate position, as shown in Figure 3B. Once the rear seat assembly 10 has been moved forward beyond the center line of the articulation mechanism 24, the rear seat assembly 10 will naturally progress toward the second intermediate position, as shown in Figure 3C. The top surface 46 of the forward portion 48 of the rear seat bottom 14 is located below the lower surface 50 of the front seat bottom 52 of the front seat assembly 54. With the rear seat assembly 10 in the second intermediate position, the riser release handle is preferably exposed and upon actuation translates the rear seat assembly 10 forward along the seat guides by means of the slide mechanism. In the stored position, as shown in Figure 3D, the rear seat assembly 10 is nested or spoons against the front seat assembly 54 in a compact space efficient fashion thereby allowing increased cargo carrying capacity within the vehicle 40.

As shown in Figure 4, the rear seat assembly 10 of an alternative embodiment preferably includes two axial springs 56 connected to the forward lift arms 16, 18 and to the rearward lift arms 20, 22. The axial spring 56 preferably functions to bias the rear seat bottom 14 from the use position to the first intermediate position. The axial spring 56 also preferably functions to bias the rear seat bottom 14 from the second intermediate position to the first intermediate position. In this manner, the axial spring 56 acts like an over-center spring. In further alternative embodiments, the axial spring 56 may function to bias the rear seat bottom 14 from the use position to the second intermediate position. The torsion spring 30 (of Figure 2) and the axial spring 56, collectively referenced as a "biasing device", function to aid the vehicle occupant in the movement of the rear seat assembly 10. Other suitable devices, such as levers or gears, may also be used to aid the vehicle occupant.

As also shown in Figure 4, the rear seat assembly 10 of an alternative embodiment preferably includes a first latching device 58 connected to the rear seat bottom 14, and selectively engageable with a first striker 60 connected with the vehicle 40 to hold the rear seat bottom 14 in the use position. Further, the alternative embodiment preferably includes a second latching device 64 connected to the rear seat bottom 14 and selectively engageable with a second striker 66 connected to the forward lift arms 16, 18 to hold the rear seat bottom 14 among the second intermediate position and the stored position. The first latching device 58 and the second latching device 64 may be used separately or in combination. When used in combination, a first

release handle 68 is preferably connected to the first latching device 58 and the second latching device 64 to simultaneously actuate the first latching device 58 and the second latching device 64.

As shown in Figure 5, the slide mechanism 26 of an alternative embodiment preferably includes a third latching device 70 having a first hook 72 extending in a forward direction and a second hook 74 extending in a rearward direction. The first hook 72 is selectively engageable with a third striker 78 connected to the vehicle 40 to hold the rear seat bottom in the stored position, while the second hook 74 is selectively engageable with a fourth striker 76 connected to the vehicle 40 to hold the rear seat bottom among the second intermediate position, the first intermediate position, and the use position. The third latching device 70 preferably includes a second release handle 80 that simultaneously actuates the first hook 72 and the second hook 74.

In order to enable the rear seat assembly to be stored in the fashion described above, the front seat assembly necessarily provides clearance for the rear seat bottom to move underneath the front seat bottom. As shown in Figure 6, a support member 82 is provided for the front seat assembly 54 in the form of a cross-car beam 84. In the preferred embodiment, the cross-car beam 84 is connected to the structure of the vehicle 40 at a height above the floor 38 of the vehicle 40 sufficient to allow the rear seat bottom to slide below the support member 82. Further, the cross-car beam 84 is preferably connected to the B-pillars 86, 88 (later referenced as "a first side panel" and "a second side panel") of the vehicle 40. In addition to enabling storage of the rear seat assembly, the cross-car beam 84 connected to the B-pillars 86, 88 of the vehicle 40 can provide increased vehicle structure improving torsional and other modal bending performance of the vehicle body, as well as potentially improving side impact performance of the vehicle. As shown in Figure 7, the front riser 90 for the front seat assembly 54 is preferably a single generally centrally located support extending from the front portion 92 of the front seat bottom 52 to the floor 38 of the vehicle 40.

As shown in Figure 8, if fore and aft adjustment of the front seat bottom 52 is desirable, the front seat assembly 54 can be mounted to fore and aft adjustment mechanisms 94 which are in turn mounted to the cross-car beam 84 and the front riser by way of a supporting platform 96. The fore and aft adjustment mechanisms 94 can be power mechanisms or manual mechanisms depending upon the particular application. Further, the seat bottom angle can be adjusted

relative to the supporting platform 96 by conventional systems known in the art. In the preferred embodiment, the front seat back 98 to front seat bottom 52 angle can be adjusted by a recline mechanism and preferably the front passenger side seat assembly 100 (shown in Figure 6) can be folded to a forward, generally horizontal position, thereby providing improved storage of long items within the interior of the vehicle 40 or for providing a work surface incorporating a fixed or removable seat back utility module.

If attaching cross-car beam to the B-pillar structure of the vehicle is not desired, the cross-car beam can be supported by attachments extending to the floor of the vehicle, the attachments being laterally displaced beyond the width of the rear seat bottom so as not to interfere with the storage of the rear seat assembly.

Further, in conjunction with the front passenger side seat assembly folding to a generally horizontal position, the rear seat assembly can incorporate a release mechanism which allows the rear seat back to fold to a generally horizontal position. If, as in the preferred embodiment, the forty percent portion of the rear seat back is folded to a horizontal position and the front passenger side seat assembly is folded to a horizontal position, items can be stored within the interior of the vehicle which extend from the rearward surface of the instrument panel to the rear most surface in the cargo storage compartment.

As shown in Figure 9, the front seat assembly 54 of an alternative embodiment preferably includes a center console 102 located between the front driver side seat assembly 104 and the front passenger side seat assembly 100. Like the front seat assembly 54, the center console 102 is connected to the cross-car beam 84 at a height above the floor 38 of the vehicle 40 sufficient to allow the rear seat bottom 14 to slide below the center console 102. The center console 102 may include cargo compartments, cupholders, cargo trays, or any other suitable device.

We claim:

1. A seating assembly for a vehicle (40), comprising a front seat assembly (54) having a front seat bottom (52), the front seat bottom (52) including a front portion and a rear portion, a rear seat assembly (10) having a rear seat bottom (14), and a track member (28) connectable to a floor portion (38) of the vehicle (40), the seating assembly characterized by an articulation mechanism (24) pivotally coupled to the rear seat bottom (14) and slidably coupled to the track member (28), a support member (82) connected to the front seat bottom (52) and connectable to the vehicle (40), the support member (82) supporting the rear portion of the front seat bottom (52) from the vehicle (40) to provide a storage space beneath the front seat bottom (52), and the rear seat bottom (14) configured to pivotally move on the articulating mechanism (24) and to slidably move on the track member (28) between a use position and a stored position where the rear seat bottom (14) is within the storage space.

2 The seating assembly of Claim 1 wherein said support member (82) is connectable to a first side panel (86) of the vehicle (40), and said support member (82) extends from said side panel (86) to said front seat bottom (52).

3. The seating assembly of Claim 2 further comprising a second front seat bottom (52), and wherein said support member (82) is connected to said second front seat bottom (52).

4. The seating assembly of Claim 3 wherein said support member (82) is connectable to a second side panel (88) of the vehicle (40), and said support member (82) extends from the first side panel (86) to the second side panel (88).

5. The seating assembly of Claim 2 further comprising a center console (102), and wherein said support member (82) is connected to said center console (102).

6. The seating assembly of Claim 1 further comprising a front riser (90) connected to said front portion of said front seat bottom (52) and connectable to the vehicle (40), and wherein said support member (82) is connected to said rear portion of said front seat bottom (52).

7. The seating assembly of Claim 6 wherein said front seat bottom (52) includes an adjustment mechanism (94) connected to said front riser (90) and to said support member (82), wherein said adjustment mechanism (94) allows horizontal movement of said front seat bottom (52).

8. The seating assembly of Claim 1 further comprising a front seat back connected to said front seat bottom (52).

9. A rear seat assembly 10 adapted for storage in cooperation with a front seat assembly (54) having a front seat bottom (52) and a front seat back in a vehicle (40), the rear seat assembly (10) having a rear seat bottom (14) connectable to the vehicle (40) for movement between a use position and an intermediate position, the rear seat assembly (10) characterized by an articulation mechanism (24) connectable to the rear seat bottom (14) and to the vehicle (40) and including a forward lift arm (16, 18) and a rearward lift arm (20, 22) that cooperate with the rear seat bottom (14) and the vehicle (40) as a four bar linkage to allow vertical and horizontal pivoting movement of the rear seat bottom (14) between the use position and the intermediate position, a biasing device (30, 56) connectable to the forward lift arm (16, 18) and the rearward lift arm (20, 22), and a slide mechanism (26) connectable to the articulation device (24) and the vehicle (40), wherein the slide mechanism (26) allows fore-and-aft horizontal movement of the rear seat bottom (14) between the intermediate position and a stored position beneath the front seat bottom (52).

10. The rear seat assembly (10) of Claim 9 wherein said biasing device (30, 56) biases said rear seat bottom (14) out of the use position.

11. The rear seat assembly (10) of Claim 10 wherein said biasing device (30, 56) also biases said rear seat bottom (14) out of the intermediate position.

12. The rear seat assembly (10) of Claim 11 further comprising a first latching device (58) connected to said rear seat bottom (14) and selectively engageable with the vehicle (40) to hold said rear seat bottom (14) in the use position.

13. The rear seat assembly (10) of Claim 12 further comprising a second latching device (64) connected to said rear seat bottom (14) and selectively engageable with said

forward lift arm (16, 18) to hold said rear seat bottom (14) among the intermediate position and the stored position; and a release handle (68) connected to said first latching device (58) and to said second latching device (64) to simultaneously actuate said first latching device (58) and said second latching device (64).

14. The rear seat assembly (10) of Claim 9 further comprising a third latching device (70) connected to said slide mechanism (26) having a first hook (72) extending in a forward direction and a second hook (74) extending in a rearward direction, wherein said first hook (72) is selectively engageable with the vehicle (40) to hold said rear seat bottom (14) in the stored position, and said second hook (74) is selectively engageable with the vehicle (40) to hold said rear seat bottom (14) among the intermediate position and the use position.

15. The rear seat assembly (10) of Claim 9 further comprising a rear seat back (12) connected to said rear seat bottom (14) and connectable to the vehicle (40) for movement between the use position and the stored position such that, when said rear seat back (12) is moved from the use position to the stored position, said rear seat back (12) abuts the front seat back of the front seat assembly (54).

16. A front seat assembly (54) and a rear seat assembly (10) for a vehicle (40), comprising a front seat bottom (52) having a front portion and a rear portion, a rear seat bottom (14) connectable to the vehicle (40) for movement between a use position and an intermediate position, the front seat assembly (54) and the rear seat assembly (10) characterized by an articulation mechanism (24) connectable to the rear seat bottom (14) and to the vehicle (40) and including a forward lift arm (16, 18) and a rearward lift arm (20, 22) that cooperate with the rear seat bottom (14) and the vehicle (40) as a four bar linkage to allow vertical and horizontal pivoting movement of the rear seat bottom (14) through the use position and the intermediate position, a biasing device (30, 56) connectable to the forward lift arm (16, 18) and the rearward lift arm (20, 22), a support member (82) connected to the front seat bottom (52) and connectable to the vehicle (40), the support member (82) supporting the rear portion of the front seat bottom (52) from the vehicle (40) to provide a stored position beneath the front seat bottom (52), and a slide mechanism (26) connectable to the articulation mechanism (24) and the vehicle (40), wherein the slide mechanism (26) allows fore-and-aft horizontal movement of the rear seat bottom (14) through the intermediate position and the stored position.

17. The front seat assembly (54) and the rear seat assembly (10) of Claim 16 wherein said support member (82) is connectable to a first side panel (86) of the vehicle (40), and said support member (82) extends from said side panel (86) to said front seat bottom (52).

18. The front seat assembly (54) and the rear seat assembly (10) of Claim 17 further comprising a second front seat bottom (52), and wherein said support member (82) is connected to said second front seat bottom (52).

19. The front seat assembly (54) and the rear seat assembly (10) of Claim 18 wherein said support member (82) is connectable to a second side panel (88) of the vehicle (40), and said support member (82) extends from the first side panel (86) to the second side panel (88).

20. The front seat assembly (54) and the rear seat assembly (10) of Claim 17 further comprising a center console (102), and wherein said support member (82) is connected to said center console (102).

21. The front seat assembly (54) and the rear seat assembly (10) of Claim 16 wherein the front seat assembly (54) is adjustable fore-and-aft on the support member (82) when the rear seat bottom (14) is in the use position or the stored position.

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(71) Applicant *(for all designated States except US)*: **JOHNSON CONTROLS INTERIORS TECHNOLOGY CORP.** [US/US]; One Prince Center, Holland, MI 49423 (US).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **HOTARY, James, T.** [US/US]; 3408 Figueroa Street, Glendale, CA 91206 (US). **BUSCH, David, B.** [US/US]; 16705 Ashley Lane, Holland, MI 49424 (US). **WIEDEMAN, Michael, E.** [US/US]; 2760 Kragspough Ct., Holland, MI 49424 (US).

(74) Agents: **COX, Jeffrey, M.** et al.; Harness, Dickey & Pierce, P.L.C., P.O. Box 828, Bloomfield Hills, MI 48303 (US).

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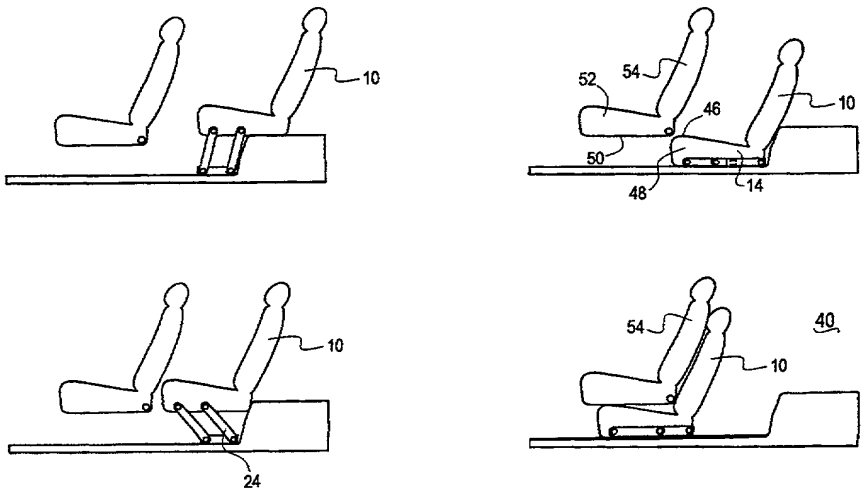
For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: SPACE EFFICIENT AND ADAPTABLE VEHICLE INTERIOR



(57) Abstract: A front seat assembly (54) and a rear seat assembly (10) for a vehicle, including a front seat bottom (52) having a front portion and a rear portion, a rear seat bottom (14) having a forward portion and a rearward portion and being connectable to the vehicle for movement between a use position and a stored position, and a support member (82) connected to the front seat bottom and connectable to the vehicle. The support member supports the rear portion of the front seat bottom from the vehicle such that the rear seat bottom may be moved from the use position to the stored position with the forward portion of the rear seat bottom located under the front seat bottom.

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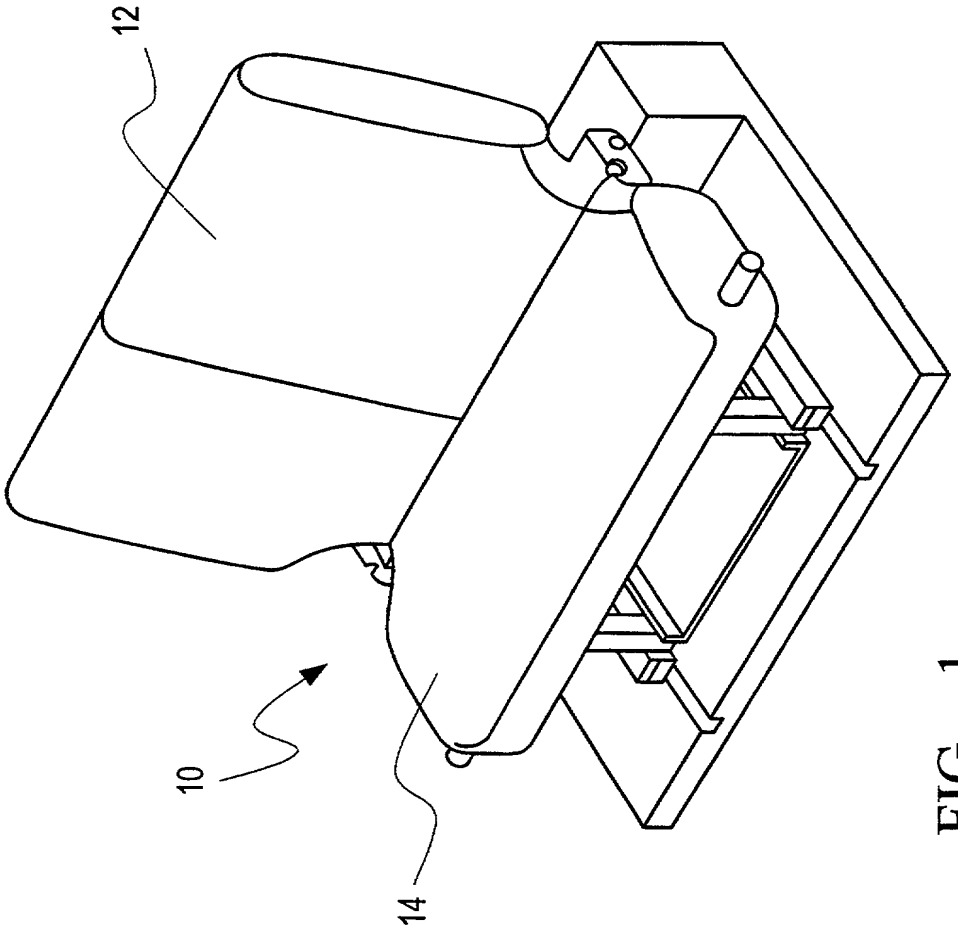

FIG. - 1

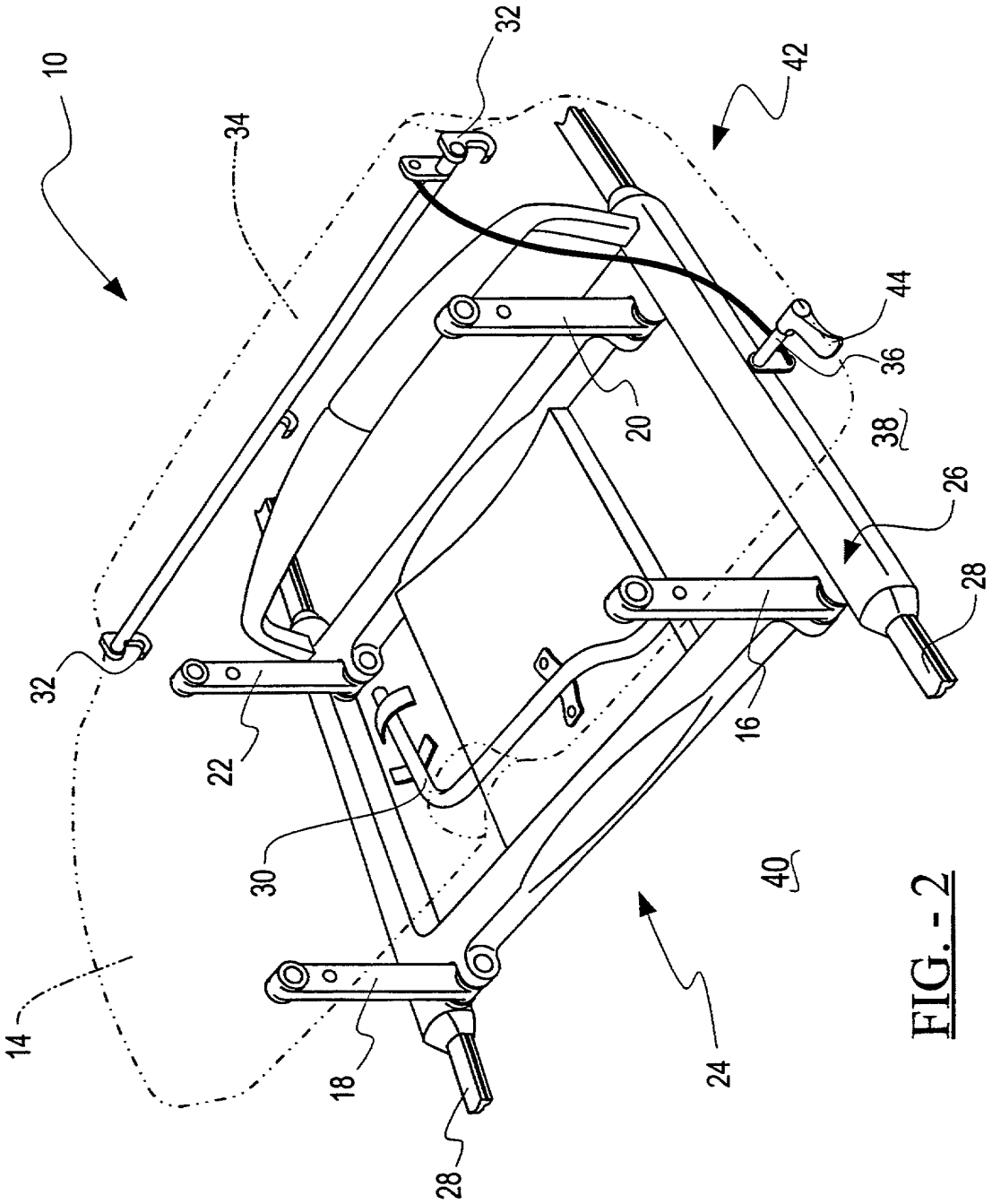

FIG. - 2

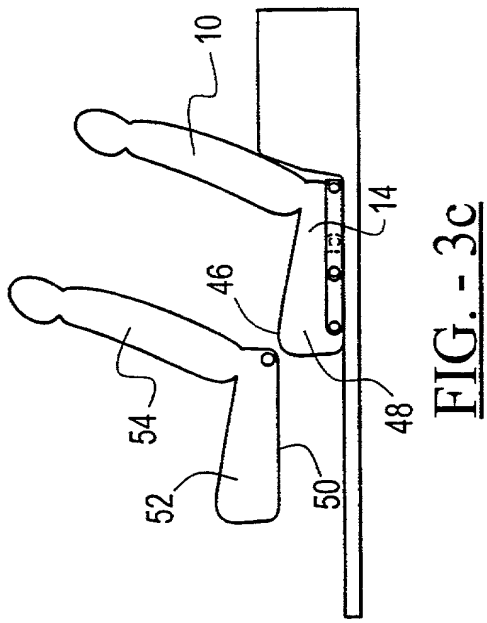

FIG. - 3c

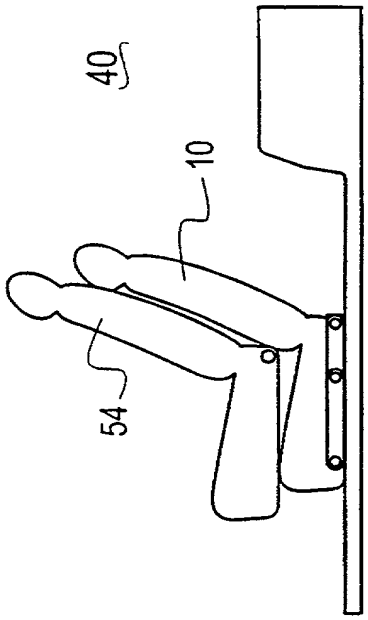

FIG. - 3d

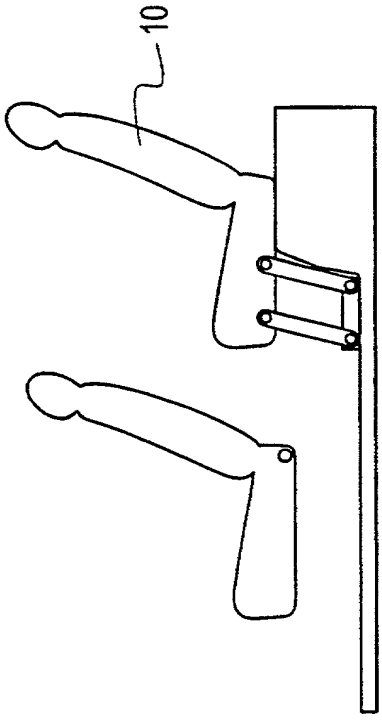

FIG. - 3a

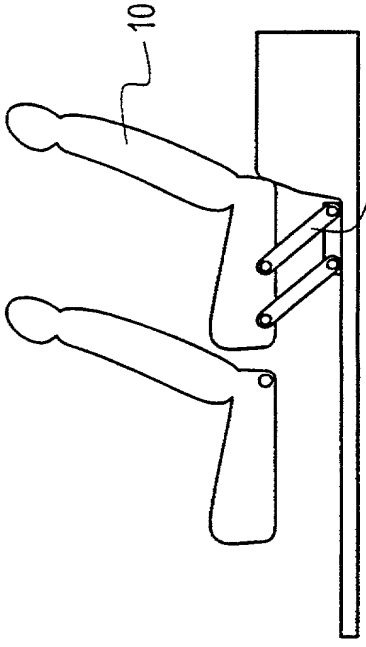

FIG. - 3b

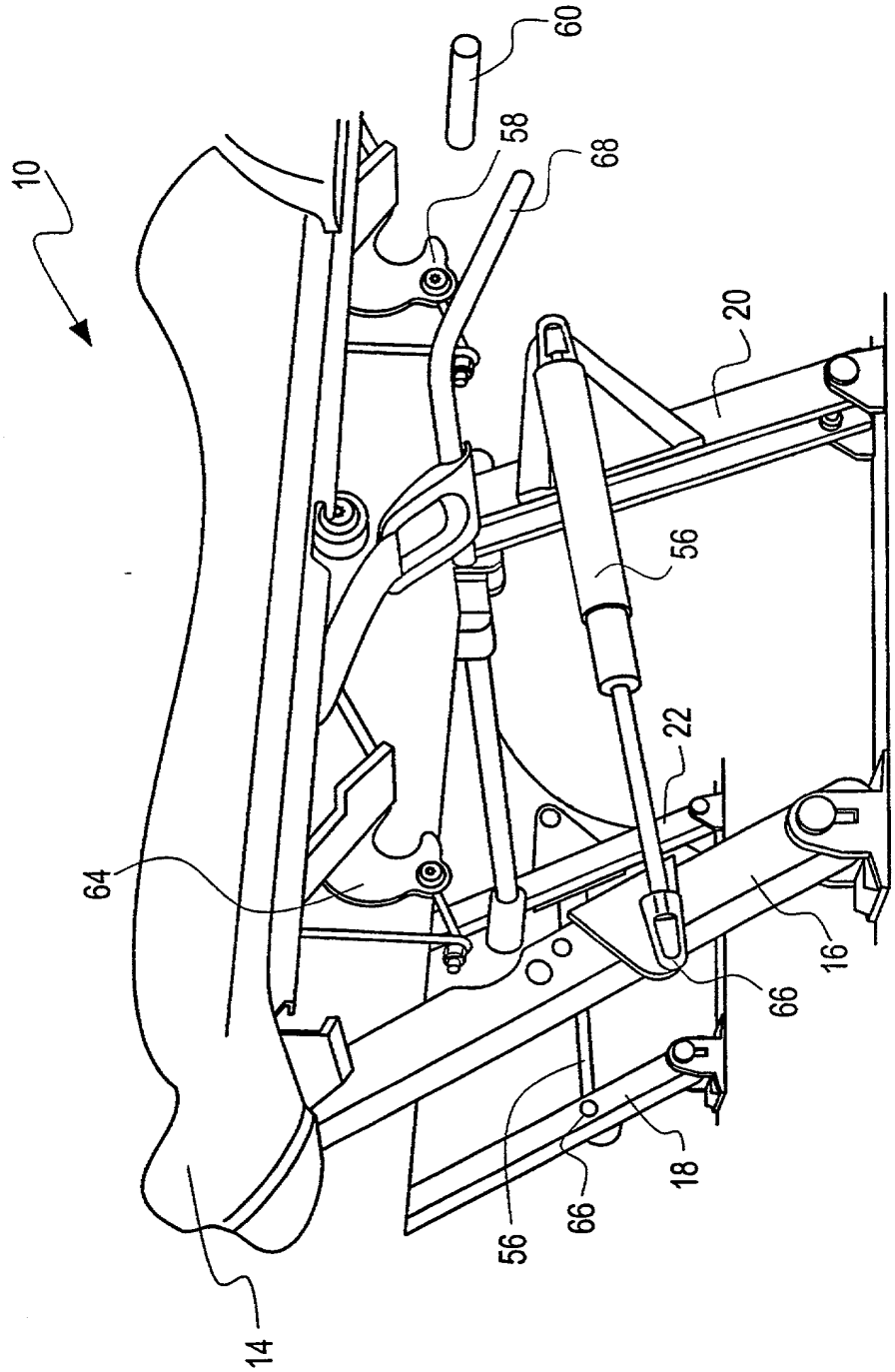

FIG. - 4

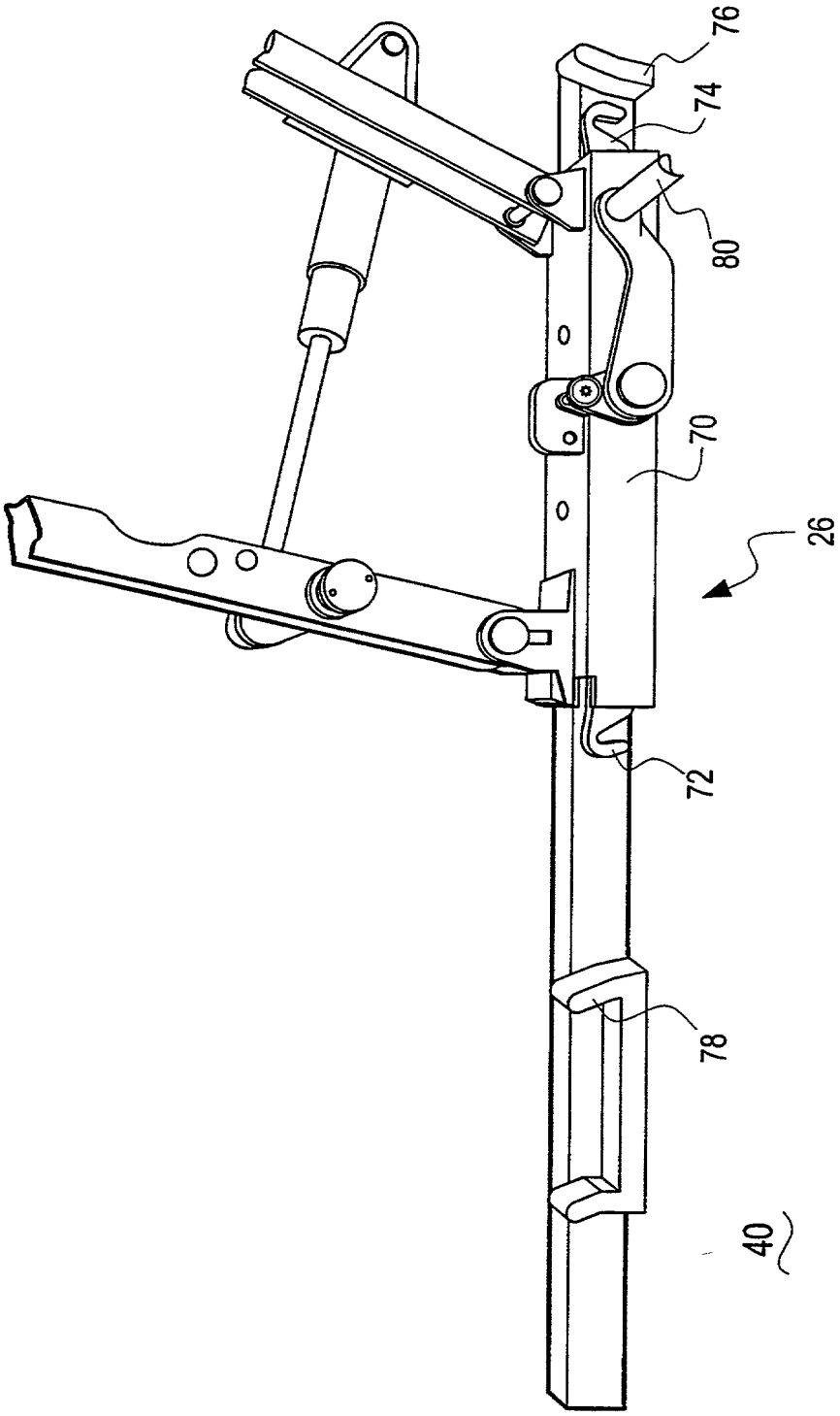

FIG. - 5

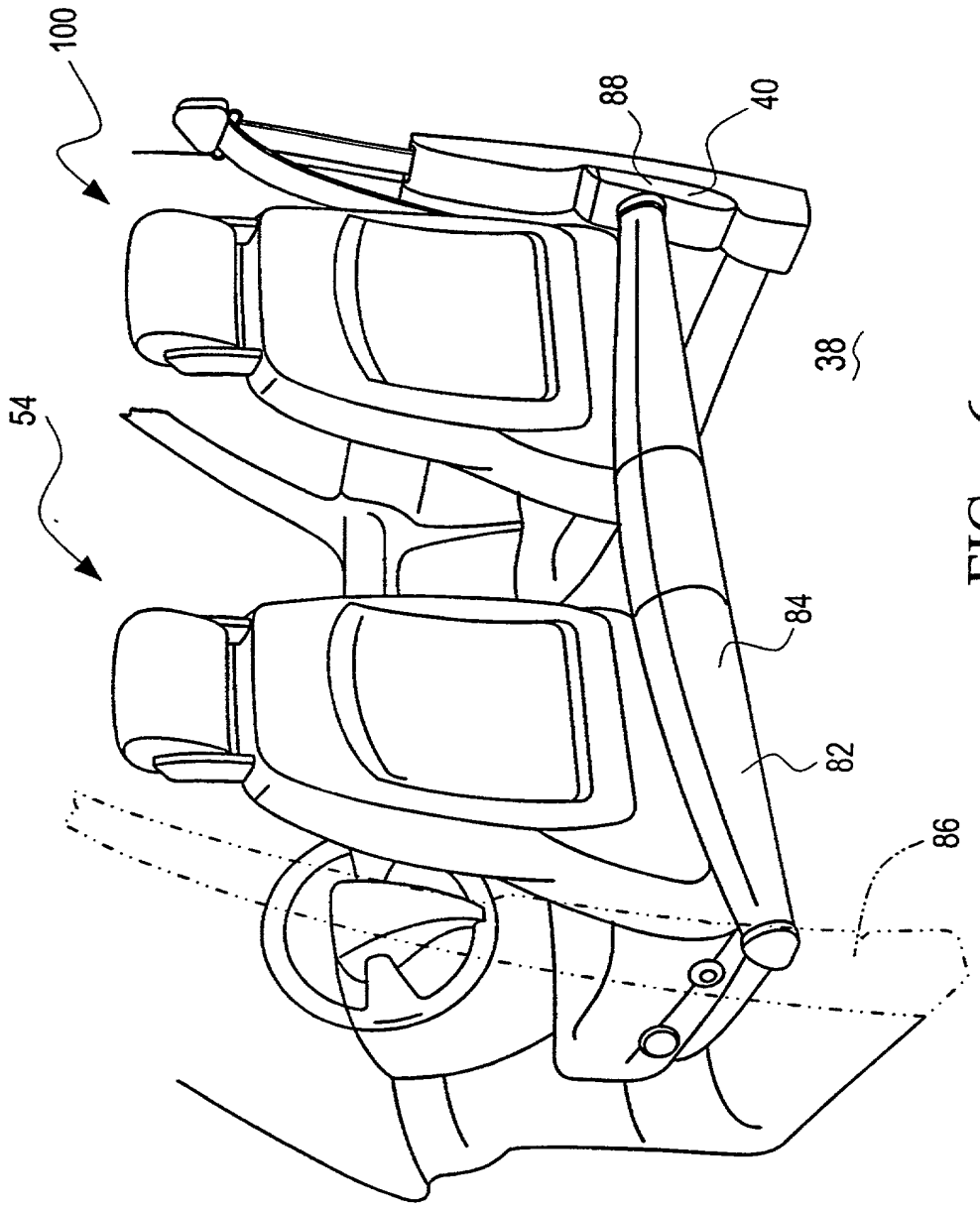

FIG. - 6

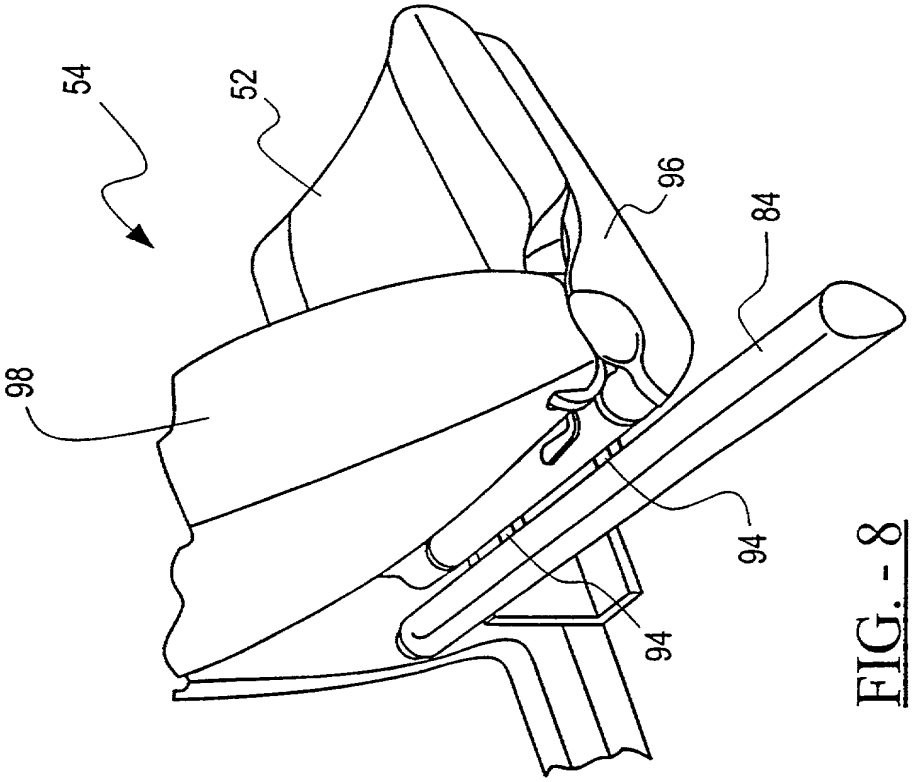

FIG. - 8

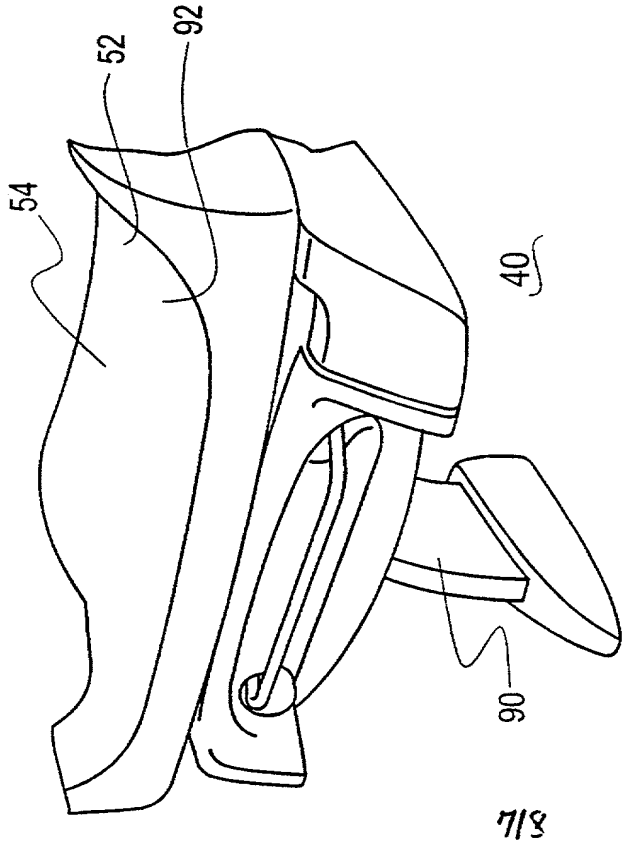

FIG. - 7

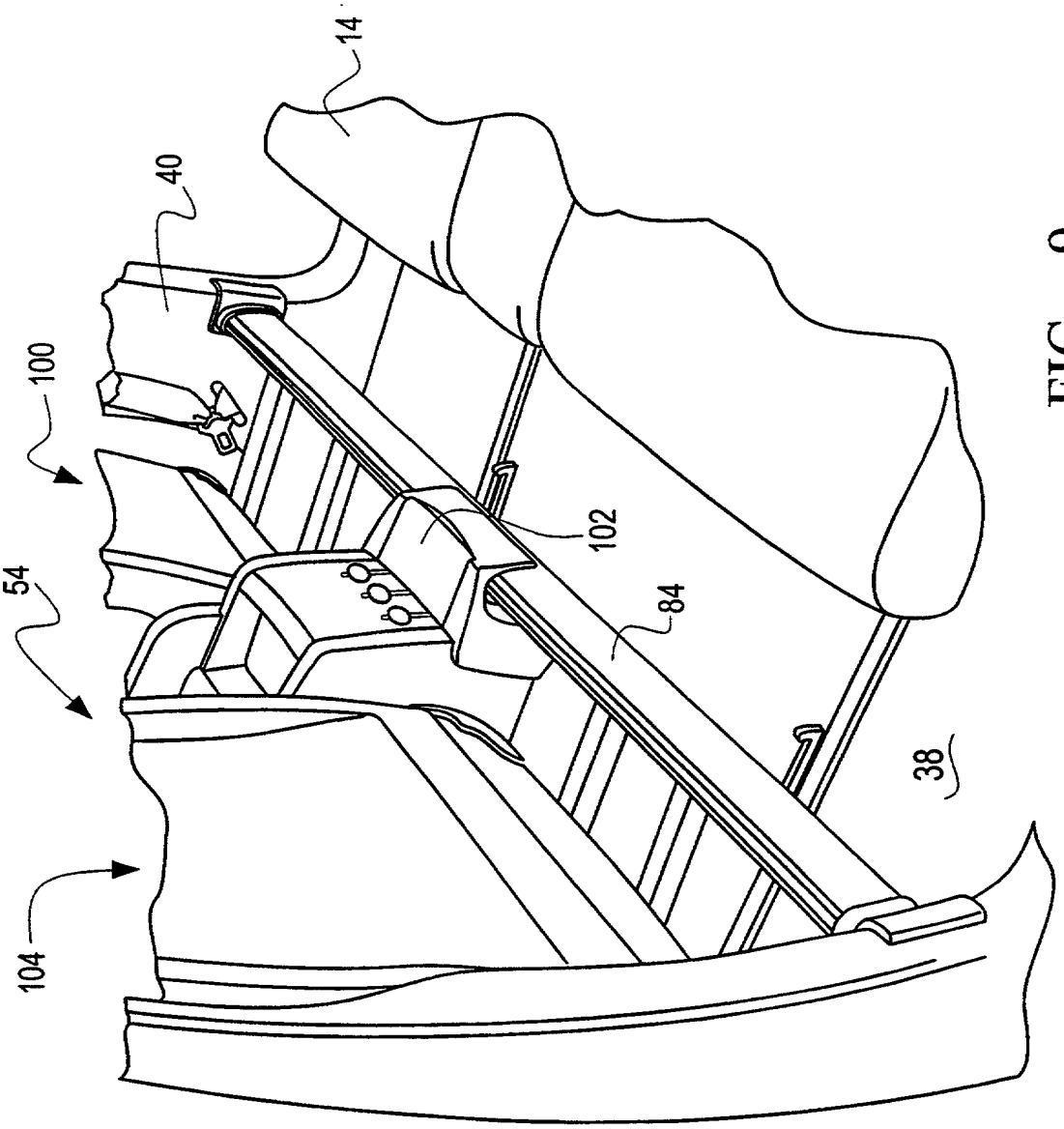

FIG. - 9

DECLARATION AND POWER OF ATTORNEY

As a below named inventor, I HEREBY DECLARE:

THAT my residence, post office address, and citizenship are as stated below next to my name;

THAT I believe I am the original, first, and sole inventor (if only one inventor is named below) or an original, first, and joint inventor (if plural inventors are named below or in an attached Declaration) of the subject matter which is claimed and for which a patent is sought on the invention entitled

SPACE EFFICIENT AND ADAPTABLE VEHICLE INTERIOR

(Attorney Docket No. 026032-3884)

the specification of which (check one)

___ is attached hereto.

__X__ was filed on __July 7, 2000__ as United States Application Number or PCT International Application Number __PCT/US00/18821__ and was amended on _____ (if applicable).

THAT I do not know and do not believe that the same invention was ever known or used by others in the United States of America, or was patented or described in any printed publication in any country, before I (we) invented it;

THAT I do not know and do not believe that the same invention was patented or described in any printed publication in any country, or in public use or on sale in the United States of America, for more than one year prior to the filing date of this United States application;

THAT I do not know and do not believe that the same invention was first patented or made the subject of an inventor's certificate that issued in any country foreign to the United States of America before the filing date of this United States application if the foreign application was filed by me (us), or by my (our) legal representatives or assigns, more than twelve months (six months for design patents) prior to the filing date of this United States application;

THAT I have reviewed and understand the contents of the above-identified specification, including the claim(s), as amended by any amendment specifically referred to above;

THAT I believe that the above-identified specification contains a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention, and sets forth the best mode contemplated by me of carrying out the invention; and

THAT I acknowledge the duty to disclose to the U.S. Patent and Trademark Office all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, §1.56.

I HEREBY CLAIM foreign priority benefits under Title 35, United States Code §119(a)-(d) or § 365(b) of any foreign application(s) for patent or inventor's certificate, or §365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below any foreign application for patent or inventor's certificate or of any PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application Number	Country	Foreign Filing Date	Priority Claimed?	Certified Copy Attached?
PCT/US00/18821	PCT	July 7, 2000	Y	N

I HEREBY CLAIM the benefit under Title 35, United States Code § 119(e) of any United States provisional application(s) listed below.

U.S. Provisional Application Number	Filing Date
60/142,711	July 7, 1999

I HEREBY CLAIM the benefit under Title 35, United States Code, §120 of any United States application(s), or § 365(c) of any PCT international application designating the United States of America, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of Title 35, United States Code, § 112, I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, § 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application.

U.S. Parent Application Number	PCT Parent Application Number	Parent Filing Date	Parent Patent Number

I HEREBY APPOINT the following registered attorneys and agents of the law firm of FOLEY & LARDNER:

SCOTT D. ANDERSON	Reg. No. 46,521
RUSSELL J. BARRON	Reg. No. 29,512
DAVID J. BATES	Reg. No. 39,902
STEVEN C. BECKER	Reg. No. 42,308
EDWARD W. BROWN	Reg. No. 22,022
CHARLES G. CARTER	Reg. No. 35,093
ALISTAIR K. CHAN	Reg. No. 44,603
JOHN C. COOPER III	Reg. No. 26,416
WILLIAM J. DICK	Reg. No. 22,205

(28)

1-OD

Name of first inventor	James T. Hotary JTH
Residence	~~Glendale, CA~~ HOLLAND, MI MI
Citizenship	U.S.A.
Post Office Address	~~3408 Figueroa Street Glendale, CA 91206~~ 2056 BREEZE DR. HOLLAND, MI 49424 JTH
Inventor's signature	
Date	4/2/02

2-OD

Name of second inventor	David B. Busch
Residence	Holland, MI MI.
Citizenship	U.S.A.
Post Office Address	16705 Ashley Lane Holland, MI 49424
Inventor's signature	
Date	4/11/02

Name of third inventor	Michael E. Wiedeman
Residence	Holland, MI
Citizenship	U.S.A.
Post Office Address	2760 Kragspough Ct. Holland, MI 49424
Inventor's signature	
Date	

BARRY L. GROSSMAN	Reg. No. 30,844
JEFFREY S. GUNDERSEN	Reg. No. 47,619
PAUL S. HUNTER	Reg. No. 44,787
JOHN M. LAZARUS	Reg. No. 48,367
KENNETH G. LEMKE	Reg. No. 47,746
KEITH D. LINDENBAUM	Reg. No. 40,365
DAVID G. LUETTGEN	Reg. No. 39,282
RICHARD J. MC KENNA	Reg. No. 35,610
JAMES G. MORROW	Reg. No. 32,505
JASON E. PAULS	Reg. No. 45,651
TODD A. RATHE	Reg. No. 38,276
MICHAEL D. RECHTIN	Reg. No. 30,128
MARCUS W. SPROW	Reg. No 48,580
M. REED STAHELI	Reg. No. 47,959
CHRISTOPHER M. TUROSKI	Reg. No. 44,456
JOHN A. VANOPHEM	Reg. No. 38,646
JAMES A. WILKE	Reg. No. 34,279
JOSEPH N. ZIEBERT	Reg. No. 35,421
WALTER E. ZIMMERMAN	Reg. No. 40,883

to have full power to prosecute this application and any continuations, divisions, reissues, and reexaminations thereof, to receive the patent, and to transact all business in the United States Patent and Trademark Office connected therewith.

I request that all correspondence be directed to:

John M. Lazarus
FOLEY & LARDNER
Firstar Center
777 East Wisconsin Avenue
Milwaukee, Wisconsin 53202-5367

Telephone: (414) 297-5591
Facsimile: (414) 297-4900

I UNDERSTAND AND AGREE THAT the foregoing attorneys and agents appointed by me to prosecute this application do not personally represent me or my legal interests, but instead represent the interests of the legal owner(s) of the invention described in this application.

I FURTHER DECLARE THAT all statements made herein of my own knowledge are true, and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Atty. Dkt. No.-026032-3884

Name of first inventor	James T. Hotary
Residence	~~Glendale, CA~~ HOLLAND, MI
Citizenship	U.S.A.
Post Office Address	~~3408 Figueroa Street Glendale, CA 91206~~ 2056 BREEZE DR. HOLLAND, MI 49424
Inventor's signature	
Date	4/2/02
Name of second inventor	David B. Busch
Residence	Holland, MI
Citizenship	U.S.A.
Post Office Address	16705 Ashley Lane Holland, MI 49424
Inventor's signature	
Date	
Name of third inventor	Michael E. Wiedeman
Residence	~~Holland, MI~~ Manhattan Beech, CA 90266
Citizenship	U.S.A.
Post Office Address	~~2760 Kragspough Ct Holland, MI 49424~~ 464 36th Place Unit A.
Inventor's signature	
Date	4-18-02

3-00